

Occultation of the Double Star 29 Aquarii observed by Mr. Snow at Ashurst. Latitude $51^{\circ} 15' 58''$ N.; Longitude $1^{\text{m}} 10^{\text{s}}$ W.

1852	Sept.	4	^h 23	^m 32	^s 38.4	Ashurst Sid. Time, Disappearance of 1st Star
			23	32	41.4	2d —

Five-foot equatoreal, power 170.

The disappearance took place at the dark limb. Probably the disappearance of the 1st star occurred 2^{s} earlier.

Note respecting the Pink Projections from the Sun's Disc observed during the Total Solar Eclipse observed in 1851. By C. Babbage, Esq.

On reading the accounts of the observations of the solar eclipse of 1852 in the *Notices of the Astronomical Society* for January, I could not but regret the shortness of the time, about $3\frac{1}{2}$ minutes, during which those interesting and important pink excrescences could be observed.

It occurred to me that it might not be impossible to render them visible at other times and under ordinary circumstances. I am induced to throw out the following suggestions, with the hope that they may fall into the hands of those who may possess instruments and leisure to make trial of the plans.

1st. I had on several occasions used small pieces of thin sheet metal placed in the focus of the object-glass of a telescope, for the purpose of covering a portion of the field, and thus obscuring the light of the moon, a planet, or a large star, in order to observe more clearly small stars or satellites in their immediate neighbourhood.

I had also, in making some experiments in order to ascertain the cause of the apparent projections of certain stars upon and within the moon's disc, produced a series of artificial occultations of the sun's light reflected from a thermometer bulb placed at the end of my garden. This was accomplished by causing a circle of sheet iron, whose circumference was cut into a series of equi-distant notches and placed immediately before the artificial star, to revolve by clock-work at the sun's rate at which the moon passes over the star.

It therefore immediately struck me, that by placing a disc of the same magnitude as the sun's image in the focus of a telescope mounted equatorially, and moving by clock-work, a continual and apparently total eclipse of the sun might be produced. If all light were carefully excluded, it seems not improbable that the pink projections would, under these circumstances, become perceptible.

2d. In case this plan should not succeed, I proposed to use the same means in the focus of the object-glass and to project the sun's

image in a darkened chamber upon photographic paper or on silver. The direct rays of the sun being cut off, it is possible that the pink projections may have sufficient power to act on the prepared materials presented to them, and we might thus obtain solar pictures of these appendages.

Even if success should not attend either of these methods, the preparations made for the latter plan might furnish us with a highly interesting series of representations of the solar spots.

The connexion of these pink prominences with a species of volcanic action connected with the solar spots seems probable from the observations recorded. The fact that one of these pink clouds was entirely dis severed from the sun's limb may be accounted for by supposing it to have arisen from a spot on the farther side of the sun. Those who have observed the dense lofty column of smoke arising in a clear calm day to great heights above a crater, have also occasionally observed the top of the column of smoke, on reaching a gentle current of air, pass on horizontally to great distances. Such a horizontal column, seen endways from a point at a great distance from our planet, might appear to be entirely disconnected from it by any continuous line of smoke.*

Dorset Street, Manchester Square, 5 June, 1852.

Extract of a Letter from Mr. Maclear, dated Aug. 1, 1852.

“Mann is not over-strong. As for myself, though I show the marks of time, I never was in better health; viz. I have neither pains nor aches, nor any thing, save pained eyes from a very free use of them.

“My seven transit wires are now *on* the micrometer frame.

“I had remarked that the variations in the error of collimation were more changeable on the whole than the variations of the micrometer readings, viz. if the variations of collimation error be applied to the readings for coincidence of a micrometer wire with a fixed wire, the readings are nearly constant.

“It appears that when the micrometer screw is kept in position by a spring, small variations in the elasticity of the spring have no effect on the position of the screw so long as the residual elasticity is sufficiently strong for the work.

* Some months before the date of this note, Mr. Upton mentioned to me a plan for making the red prominences generally visible. The sun's image having been admitted into a darkened room, was to pass through an aperture in a white surface, the aperture being just equal to the image. The light after passing was to be afterwards absorbed in a box lined with black cloth. If the light could be sufficiently destroyed, it was expected that the red prominences might be seen on the rim of the aperture. Oddly enough, Mr. Upton had understood that the idea of the foregoing experiment originated with me, which it certainly did not, nor do I know the proposer. I mention this to prevent any misunderstanding.
—R. SHEEPHANKS.